PRESCRIBED FIRE BURN PLAN
San Diego National Wildlife Refuge Complex

Refuge: San Diego National Wildlife Refuge

Prepared By: Gordon Jones, Prescribed Burn Boss

Reviewed By: Bill Watercourse Date: 2/22/03
Fire Management Officer

The approved Prescribed Fire Plan constitutes the authority to burn, pending approval of Section 7 Consultations, Environmental Assessments or other required documents. No one has the authority to burn without an approved plan or in a manner not in compliance with the approved plan. Prescribed burning conditions established in the plan are firm limits. Actions taken in compliance with the approved Prescribed Fire Plan will be fully supported, but personnel will be held accountable for actions taken which are not in compliance with the approved plan.

Approved By: Date:
Refuge Manager/Project Leader

PRESCRIBED FIRE PLAN

Refuge: San Diego **Refuge Burn Number:**

Sub Station: **Fire Number:**

Name of Area: Sweetwater River **Unit No.**

Acres to be Burned: 20 **Perimeter Of Burn: handpiles are located along riparian corridor adjacent to road**

Legal Description: Lat.32'44" Long.116'57" T 17S ,R 1 W,S 3

County: San Diego **Complexity: 3, Low**

Is a Section 7 Consultation being forwarded to Fish and Wildlife Enhancement for review ? Yes No (circle). The area to be burned has already been disturbed in the past due to road construction. Piles are located along the road. No standing/live vegetation is to be burned and timing is outside of nesting season.

(Page 2 of this PFP should be a refuge base map showing the location of the burn on Fish and Wildlife Service land)

The Prescribed Fire Burn Boss/Specialist must participate in the development of this plan.

I. GENERAL DESCRIPTION OF BURN UNIT

Physical Features and Vegetation Cover Types (Species, height, density, etc.):

Primary goal of brush clearing was exotic species removal (Arundo & tamarisk)along the Sweetwater River corridor. Vegetation was hand cut and piled for burning. Approximately 10 brush piles were created which lay adjacent to the access road which runs from Hwy 94 to the eastern end of the Sweetwater Reservoir. The surrounding vegetation is Riparian and coastal sage scrub.

Primary Resource Objectives of Unit (Be specific. These are management goals):

1. **The removal of non-native vegetation.**
2.
3.
4.

Objectives of Fire (Be specific. These are different than management goals):

1. **Disposal of slash piles with at least a 98% consumption of material.**
2.

3)
4)

Acceptable Range of Results (Area burned vs. unburned, scorch height, percent kill of a species, range of litter removed,etc.):

1)80-100% removal of piled debris.
2)10% scorch of native adjacent to piles.
3)

II. PRE-BURN MONITORING

Vegetation Type	Acres	%	NFFL Fuel Model
surrounding area (costal sage scrub)	20	100	4
Total			

Habitat Conditions (Identify with transect numbers if more than one in burn unit.):

The slash piles are less than one year old and not considered habitat. Surrounding habitat is potentially least bill vireo and gnat catcher. Neither should be affected since timing of burn is outside of nesting season and will not consume the riparian or coastal sage scrub.

Type of Transects: None

Photo Documentation (Add enough spaces here to put a pre-burn photo showing the habitat condition or problem you are using fire to change/correct. A photo along your transect may reflect your transect data.): N/A

Other:

III. PLANNING AND ACTIONS

Complexity Analysis Results:
This burn is considered low complexity due to the debris to be burned and seasonality. Some caution needs to be exercise to maintain good smoke dispersal.

Site preparation (What, when, who & how. Should be done with Burn Boss):

The slash will be piled in piles of less than 1 ton each to allow for control of burning. Piles will be located adjacent to a road which allows for good access by equipment and personnel. A wildland engine with crew will be on scene to assist with lighting and control heat output.

Weather information required (who, what, when, where, how, and how much):

The burn boss will obtain a spot weather forecast prior to ignition. Weather information will be taken on site with a belt weather kit.

Safety considerations and protection of sensitive features (Adjacent lands, visitors, facilities, terrain, etc., and needed actions. Include buffer and safety zones. Be specific, indicate on a burn unit map. Map should be a USGS quadrangle if possible, so ridges, washes, water, trails, etc. can be identified.)

The piles to be burned are on a road. There is good access to area (an engine can drive right to the piles. Terrain is flat. There are no structures near the site. A test burn will be conducted to identify spread and spotting potential. Adjacent to the piles (south) is a wet riparian and corridor with running creek. The Burn Boss needs to brief crews prior to ignition regarding objectives. One engine needs to be on scene prior to ignition. Smoke dispersal needs to be monitored but due to the limited amount of fuel and ability to terminate the project immediately, smoke does not present a problem.

Special Safety Precautions Needing Attention (Aerial ignition, aircraft, ignition from boat, etc.):

Each individual pile will be ingited separately by personnel using drip torches and/or fusees. The Burn Boss will attempt to minimize the amount of smoke that blows toward Hwy 94 if it appears dispersal is not sufficient. Continual monitoring of this factor will be a concern.

Media Contacts (Radio stations, newspaper, etc., list with telephone numbers): None.

Special Constraints and Considerations (Should be discussed with Burn Boss):

Burn piles will be kept small and allowed to burn down completely. A wildland engine, and fire qualified personnel will be standing by. Local agencies will be notified of the prescribed burns. The engine will have road access to the burn site. All personnel will be briefed on the prescribed fire plan, potential hazards and safety zones. Qualified personnel will also be equipped with Personal Protective Equipment and King radios will be available for communication. All equipment will be safety checked prior to ignition. Smoke drift will be minimized through direct intervention by engine crew if Hwy 94 appears to be affected.

Communication and Coordination on the Burn (Who will have radios, frequencies to be used, who will coordinate various activities.):

Burnboss, ignition specialist, and holding boss will be equipped with radios on the TAC 2, 168.200. The burn boss will discuss ignition, suppression and safety issues with crew prior to performing burn.

IV. IGNITION, BURNING AND CONTROL

Planned or Proposed **Actual**

Scheduling: Approx. Date(s): **February 2000**

Time of Day: **0900-1500**

FBPS Fuel Model: 6 (actual piles), surrounding area is unclassified)	Acceptable Range Low	High	Actual
Temperature	40	70	
Relative Humidity	100	40	
Wind Speed (20' forecast)	0	10	
Wind Speed (mid-flame)	0	5	
Cloud Cover (%)	100	0	
ENVIRONMENTAL CONDITIONS			
Soil Moisture	N/A	N/A	
1 hr. Fuel Moisture	25	10	
10 hr. FM	25	10	
100 hr. FM	N/A	N/A	
Live(foliage) Fuel Moisture	300	100	
Dead Fuel Moisture	25+	10	
Litter/Duff Moisture	N/A	N/A	
FIRE BEHAVIOR	for adjacent vegetation	for adjacent vegetation	
Type of Fire	head	head	

Rate of Spread	**0**	**184**	
Fireline Intensity	**0**	**8257**	
Flame Length	**0**	**29**	
Heat Per Unit Area **NFDRS Fuel Model ____4___**	**0**	**2453**	

Cumulative effects of weather and drought on fire behavior:

The slash piles to be burned are made up of cured woody debris with some residual moisture content. The potential for spread outside of the piles is directly related to weather and drought. Burning must be timed to coincide with high live fuel moisture and minimal fire weather conditions.

Ignition Technique (Explain and include on map of burn unit. Use of aerial ignition must be identified in this plan. Last minute changes to use aircraft will not be allowed and will be considered a major change to the plan. This will require a re-submission):

Drip torches and fusees will be used for ignition of the slash piles. The slash piles will be progressively burned dependent upon weather conditions.

Prescribed Fire Organization (See Section VII, Crew and Equipment Assignments. All personnel and their assignments must be listed. All personnel must be qualified for the positions they will fill.)

BURN BOSS: Bill Watercourse
IGNITION: FWS Engine 3647
SUPPRESSION: FS Engine 3647
LOOK OUT: to be assigned on scene

Other (If portions of the burn unit must be burnt under conditions slightly different than stated above, i.e., a different wind direction to keep smoke off of a highway or off of the neighbors wash, detail here.)
N/A
Prescription monitoring (Discuss monitoring procedure and frequency to determine if conditions for the burn are within prescription):

A spot weather forecast will be obtained prior to the burn. On site weather

monitoring will be performed prior to beginning ignition and on arrival on the site and as throughout the duration of the burn.

V. SMOKE MANAGEMENT

Make any Smoke Management Plan an attachment.

Permits required (who, when):

Air Pollution Control District Burn permit will be submitted along with a PIFRS report.

Distance and Direction from Smoke Sensitive Area(s):

HWY 94 is approximately 2 mile to the east and residential areas approximately 1 mile to the east.

Necessary Transport Wind Direction, Speed and Mixing Height (Explain how this information will be obtained and used):

Local winds will be calm or light westerly when unit is burned. Visual indicators will be used on site to determine if vertical movement is acceptable. Wind speed and direction will be monitored on and off site to determine is conditions are and continue to be acceptable.

Visibility Hazard(s) (Roads, airports, etc.):

There are no areas needing caution other than the monitoring of HWY 94.

Actions to Reduce Visibility Hazard(s): Burning will be conducted on permissive burn days only. Burning will be done on days when there is wind flow other than west or when the speed is not greater than 5 miles per hour to promote vertical movement. Vertical movement of test burn smoke column will indicate acceptable standards. Burning will be immediately halted and smoke production suppressed if conditions change or signal unacceptable results.

Residual Smoke Problems (Measures to reduce problem, i.e., rapid and complete mop-up, mop-up of certain fuels, specific fuel moisture, time of day, etc.):

Due to the age and dryness of the fuels, large amounts of smoke are not anticipated. If the need for mop-up should occur, a wildland engine and personnel will be present to fully extinguish any lingering smokes prior to departing the burn project.

Particulate emissions in Tons/Acre and how calculated (This should be filled in after the burn so more precise acreage figures can be used):

Less than one ton per acre will be consumed.

VI. FUNDING AND PERSONNEL

Activity Code: 11720-9263-

Costs

	Equipment & Supplies	Labor	Over-time	Staff Days	Total Cost
Administration (planning, permits, etc.)	50	100	0	2	150
Site Preparation	100	320	0	2	420
Ignition & Control	100	320	500	2	920
Travel/Per- Diem	0	0	0	0	0
Total	250	740	0	6	1490

VII. BURN-DAY ACTIVITIES

Public/Media Contacts on Burn Day (List with telephone numbers):
The following will be notified prior to burning:

Cleveland Emergency Command Center #557-5262
California Dept of Forestry & Fire Protection #442-1615
CDF business # 588-0386
Tom Buck, Refuge Manager, San Diego NWR #669-7243
Slader Channel, Deputy Project Leader, San Diego NWRC, #760-930-0123

Crew & Equipment Assignments (List all personnel, equipment needed, and assignments. The following is not an all inclusive list for what you may need.)

Burn Boss/Manager -Bill Watercourse
Ignition Specialist - Gordon Jones

Ignition Crew - FWS Engine 3647
Holding Specialist -John Pine
Holding Crew - FS engine 46
Aircraft Manager -N/A
FWBS - Fred WorkMore
Dispatcher- Cleveland Dispatch 557-5262

Crew Briefing Points (Communications, hazards, equipment, water sources, escape fire actions, etc. To be done by Burn Boss. Refer to Safety Considerations in Planning Actions and points listed below):

The prescribed burn crew will be briefed on potential fire hazards, safety zones/escape routes, water sources, and any potential smoke management/road/traffic control problems. All crew members will have radio communications with each another and dispatch.

Ignition Technique (Methods, how, where, who, and sequence. Go over what was submitted in Section IV and any changes needed for the present conditions.) Attach ignition sequencing map if necessary:

The crew will use a drip-torch and/or fusees to light off the slash piles one at a time. Each pile will be allowed to fully burn prior to ignition of another. There are approximately 10 piles to be burned, lined up from east to west, which will be burned in a progressive manner.

Personnel Escape Plan:

The access road will be used to escape the area if necessary. The crews will be briefed on escape route and safety zone locations.

Special Safety Requirements:

The drip-torch will be operated by one person, with the engine in position with holding personnel and a charged line. Ignition person and holding/lookout crew will be in continuous eye and radio contact. The crew will be briefed on any potential hazards in the area.

Go-No-Go Checklist:

1 - Weather Forecast
2 - Holding Forces on scene
3 - On site briefing held
4 - Notifications made

Holding and Control:

Critical Control Problems: **none anticipated due to size, location and planned weather conditions.**

Water Refill Points: **Fire hydrants are located at HWY 94** and Singer Lane.

Other:

Contingency Plan for Escaped Fire (Are there crews standing by to initial attack or will people doing other jobs be called upon to do initial attack, who must be called in case of an escape, what radio frequencies will be used, etc.)

There will be enough personnel on hand to act as a suppression team if necessary. The wildland engine has full road access to the burn piles and surrounding area. The California Dept of Forestry will be notified of the burn as well as others listed on the notification list in this burn plan.

If on site forces are not sufficient to handle a escape, the Burnboss will call 911 and ask for assistance from CDF. If the burn escapes the capabilities of resources on scene, then the prescribed burn will be declared a wildfire, and suppressed.

Mop Up and Patrol:

Mop-up, if needed, will be performed immediately following the burn prior to leaving the site. If smoldering persists, the engine and crew will check the site periodically until all smokes are extinguished.

Rehabilitation Needs: N/A

DI 1202 Submission Date:

Special Problems: N/A

VIII. CRITIQUE OF BURN

Were burn objectives within acceptable range of results? (Refer to Section I):

What would be done differently to obtain results or get better results?

Was there any deviation from plan? If so, why?

Problems and general comments:

IX. POST-BURN MONITORING

Date:_____ Refuge Burn Number:

Length of Time after Burn:

Vegetative Transects:

Comments on Habitat Conditions, etc.:

Photo Documentation:

Other:

X. FOLLOW-UP EVALUATION

Date: _____ Refuge Burn Number:

Length of Time after Burn:

Vegetative Transects:

Comments on Habitat Conditions, etc.:

Photo Documentation:

Other: